

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listings of Claims:

Claims 1-10 (canceled)

11. (currently amended): A ~~universal~~ modulator for ~~receiving~~ combining a plurality of ~~baseband input~~ received signals and outputting a desired RF output signal, the modulator comprising:

(a) a summing amplifier having a first input for receiving a video signal, a second input for receiving a first audio signal, a third input for receiving a second audio signal, and an output for outputting a modulated summed signal;

(b) a first PLL frequency synthesizer for generating a first frequency for mixing with the modulated summed signal to generate a high intermediate frequency (HI-IF) signal ~~a baseband audio signal to relocate said baseband audio signal within a desired bandwidth; and~~

(c) a second PLL frequency synthesizer for generating a second frequency for mixing with the HI-IF signal to generate the desired output signal ~~a summed signal~~

~~within the desired bandwidth which includes said relocated baseband audio signal and a baseband video signal to produce a HI-IF signal;~~

~~a third PLL frequency synthesizer for generating a third frequency for mixing with said HI-IF signal to produce an RF output signal;~~

~~means for selecting said first, second and third PLL frequency synthesizers based upon said desired RF output signal including:~~

~~means for determining a first PLL frequency for said first synthesizer;~~

~~means for determining a second initial PLL frequency for said second synthesizer;~~

~~means for comparing said second initial PLL frequency with a third initial PLL frequency for said third synthesizer to determine whether any interfering oscillator difference beat frequencies exist within the bandwidth of said RF output signal; and~~

~~means for adjusting said second and third initial PLL frequencies to move any interfering ODBFs out of the bandwidth of said RF output signal.~~

Claim 12 (canceled)

13. (new): The modulator of claim 11 further comprising:

(d) an audio mixer for receiving a baseband audio input signal and outputting the first audio signal to the second input of the summing amplifier; and

(e) a third frequency synthesizer electrically coupled to the audio mixer for generating a third frequency for mixing with the baseband audio input signal to generate the first audio signal.

14. (new): The modulator of claim 11 further comprising:

(d) an up-conversion mixer having an input electrically coupled to the output of the summing amplifier for receiving the modulated summed signal and outputting the HI-IF signal.

15. (new): The modulator of claim 14 wherein the up-conversion mixer is electrically coupled to the first frequency synthesizer for receiving the first frequency for mixing with the modulated summed signal to generate the HI-IF signal

16. (new): The modulator of claim 11 further comprising:

(d) a down-conversion mixer for receiving the HI-IF signal and outputting the desired output signal.

17. (new): The modulator of claim 16 wherein the down-conversion mixer is electrically coupled to the second frequency synthesizer for receiving the second frequency for mixing with the HI-IF signal to generate the desired output signal.

18. (new): The modulator of claim 13 further comprising a common communication bus, electrically coupled to the first, second and third synthesizers, for programming the first, second and third frequencies.

19. (new): The modulator of claim 18 further comprising a switch, electrically coupled to the common communication bus, for selectively providing the second audio signal to the third input of the summing amplifier.

20. (new): The modulator of claim 11 further comprising a clamp for limiting the amplitude of the video signal.

21. (new): The modulator of claim 20 further comprising an adjustable amplifier, electrically coupled to the clamp, for adjusting the gain of the video signal.

22. (new): The modulator of claim 21 further comprising a common communication bus, electrically coupled to the adjustable amplifier, for controlling the gain adjustment.

23. (new): The modulator of claim 21 further comprising a limiter, electrically coupled to the adjustable amplifier, for clipping signal peaks of the video signal.

24. (new): The modulator of claim 11 further comprising an adjustable amplifier for adjusting the gain of the first audio signal.

25. (new): The modulator of claim 24 further comprising a common communication bus, electrically coupled to the adjustable amplifier, for controlling the gain adjustment.

26. (new): The modulator of claim 11 wherein the modulator is incorporated into a cable television (CATV) settop box.

27. (new): The modulator of claim 26 wherein the desired output signal is coupled to a television receiver external to the modulator.

28. (new): A method for combining a plurality of received signals and outputting a desired output signal, the method comprising:

- (a) receiving a video signal;
- (b) receiving a first audio signal;
- (c) combining the video signal and the first audio signal to generate a modulated summed signal;
- (d) generating a first frequency for mixing with the modulated summed signal to generate a high intermediate frequency (HI-IF) signal; and
- (e) generating a second frequency for mixing with the HI-IF signal to generate the desired output signal.

29. (new): The method claim 28 further comprising:

- (f) receiving a baseband audio input signal; and
- (g) generating a third frequency for mixing with the baseband audio input signal to generate the first audio signal.

30. (new): The method claim 28 further comprising:

- (f) receiving a second audio signal; and
- (g) combining the video signal, the first audio signal and the second audio signal to generate the modulated summed signal.

31. (new): The method of claim 28 further comprising
(f) limiting the amplitude of the video signal.
32. (new): The method of claim 28 further comprising
(f) adjusting the gain of the video signal.
33. (new): The method of claim 28 further comprising
(f) clipping signal peaks of the video signal.
34. (new): The method of claim 28 further comprising
(f) adjusting the gain of the first audio signal.